LACERATION OF THE CERVIX UTERI.

THE

ADDRESS IN OBSTETRICS

DELIVERED BEFORE THE

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA,

BY

WILLIAM GOODELL, A.M., M.D.,
CLINICAL PROFESSOR OF GYNÆCOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

At its Annual Meeting held at Pittsburg, May, 1878.

REPRINTED FROM ITS TRANSACTIONS.

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GENTLEMEN:

IN these halcyon days of Abstracts, Retrospects, and of book-clubs, it seems to me a thankless task to jot down the annual snail-pace progress of any given branch of medicine. I have, therefore, ventured to narrow down the Address in Obstetrics, with which you have kindly honored me, to a single subject—that of Laceration of the Cervix Uteri. This subject I have chosen, not because it is new, nor because it is one in which there is much room for original work, for my friend, Dr. T. A. Emmet, has written pretty much all that can be said about it; but because it is one the importance of which is too little recognized by my brothers in this State, and I thought that the experience of one of their own number would perhaps serve to call their attention to it.

The cervix uteri often gives way during labor, far more frequently than it ought, far more frequently, indeed, than it would, were nature oftener allowed to take the lead. In these busy days there is unfortunately a tendency to urge on labor, more, I fear, for the sake of the physician than for that of his patient. The means used for this purpose are, the early rupture of the membranes, the administration of ergot, the resort to the forceps before the os uteri has become dilatable, and the efforts made to push up the thinned-out cervix over the presenting part. Now these means hasten the passage of the head through the os uteri, and consequently they are fraught with danger to the integrity of the cervix. Among them the early breaking of the bag of waters takes rank, for it is far more frequently resorted to than any other mode of quickening labor.

To show how common this practice has of late become, let me give some instances: At a meeting of one of the branch societies of the British Medical Association a member stated[1] that "he was

[1] British Medical Journal, January 5, 1878, p. 17.

in the habit of rupturing the membranes as soon as he arrived in every case of labor, and found this very useful." Another remarked "that at one time he thought the membranes were of some use, but he did not now believe it." Yet each of these statements was allowed to pass unchallenged. Again, a late writer,[1] in giving an analysis of eight hundred cases of labor, says: "I have never found any ill effects from rupturing the membranes when the os is the size of a shilling, but find that the child's head is a better wedge than the bag of liquor amnii. I am further convinced that much assistance can be rendered by the accoucheur gently dilating the os uteri with the finger during a pain, after the rupture of the membranes" Instead of sharply criticizing this unsound practice, a leader[2] in one of the most influential British medical journals, to my surprise, warmly upheld it. "Dr. Matthews Duncan," it adds, "in his book on the 'Mechanism of Natural and Morbid Parturition,' has given experiments which go to show that the pressure necessary to rupture the membranes is about as great as that required to expel the child. It seems reasonable to suppose that if less force is expended in rupturing the membranes, there will be more in reserve to expel the child." Now all this I cheerfully grant, and if the chief end of the obstetrician be to deliver his patient *quickly*, the early rupture of the bag of waters is a means to the end. But if his chief end is to deliver his patient *safely*, then he must, other things being equal, let the membranes alone until the os has fully opened. And this advice holds with greater force in first labors, in which such rents of the cervix uteri far more frequently take place.

This lesion may happen at any point in the rim of the os uteri, but when single the site of the fissure is usually on the side towards which the vertex presented, and it is therefore more often found on the left verge. When the rent is a double one, the cleft, according to my observation, usually runs across the cervix from left to right, splitting it into a fore-lip and a hind-lip.

Apart from bleeding no immediate symptoms attend this lesion. The cervix is so lengthened out, bruised, and swollen by the passage of the child, and hangs down from the vaginal roof so limp, that a rent in its rim is not easily discoverable directly after labor. Such a lesion may, however, be suspected whenever an oozing, or even a flooding, keeps on, notwithstanding the womb is firmly contracted and the perineum uninjured. I have seen an alarming

[1] London Lancet, October 20, 1877, p. 569.

[2] Ibid., November 3, 1877, p. 662.

flooding happen from this cause, but this is rare, because, although the rent may extend beyond the line of junction with the vaginal roof, the utero-cervical artery, or circumflex branch of the uterine artery, from its own elasticity and from its loose connections with the parts, will usually stretch, and thus escape being torn across.

The behavior of such a rent depends largely upon its site. If it be in the fore-lip or in the hind-lip of the cervix, or even if it cleave the cervix in two through the conjugate diameter, it will very generally heal up, and by the first intention. This fortunate result happens, because the greatest play of the womb being forward and backward, the fissure-line coincides with the line of the greatest uterine mobility. The lips of the wound, therefore, do not spread apart, but are kept together by the elastic compression of the vaginal walls. When, however, the rent is lateral, or it cleaves the cervix transversely, the fissure-line no longer coincides with the axis of motion, but crosses it. Also, in the up and down play of the womb, the hind-lip is liable to hitch on the sacrum and be forced away from its fellow. Hence these two sets of uterine movements tend to separate the flaps and keep the wound from healing.

When immediate union takes place, nothing untoward happens besides the primary symptom of bleeding. But if the wound is a deep one, and slow to heal up, or it gapes open and fails to close, symptoms of perimetritis, or of parametritis, are, in my experience, pretty sure to show themselves. On the third or the fourth day the woman will complain of pain in that broad ligament, which corresponds to the torn side of the cervix. This pain is often ushered in by a chill. Occasionally, if the rent be a double one, after the inflammation has subsided on one side, it will take a fresh start on the other. The pulse keeps up and the body-heat high. Sometimes pain will be absent, and the inflammatory symptoms latent, yet the convalescence will be slow, unaccountably so, unless firm pressure be made in each iliac fossa, when the woman will flinch.

By retarding the process of involution such inflammations keep the womb bulky, make the lochia too abundant, and delay the convalescence. If the rent heals up the woman's health will in time become re-established; but should no union take place, she will never be the same woman that she was before her labor. When she leaves her bed she may complain of a sense of weight in the pelvic regions, of backache, of a constant tired feeling, of loss of sexual desire, of pain during coition, or of a show following it. Her linen will be stained and stiffened by an abundant leucorrhœal discharge. The menses will be profuse, and the intervals between them shorter.

In time the nervous system will become deranged. The woman loses sleep, and gets to be a complaining and an hysterical creature—perhaps, indeed, a confirmed invalid. Sometimes lactation will stave off these symptoms, by keeping the menses in check, and by its derivative action on the blood circulating in the womb. But as soon as the child is weaned, or the menses reappear, the woman will begin to complain.

Now what has happened to produce all this turmoil? The rent in the cervix has not healed up, and its flaps have spread apart and curled over like a split celery-top, exposing the cervical canal. Chafed by constant attrition on the posterior vaginal wall, the now unshielded lining membrane of this canal begins to shed its epithelium faster than it can be replaced, and becomes raw. Involution is arrested, and the heavy womb, having lost its vaginal prop either sags down or flops over backward. Then losing its angle of attachment to the vagina, it comes to lie more like the stopper of a bottle—that is, more in the axis of the vagina. The male organ must now impinge, not as before, on the side of the cervix, or below it, but directly into the split and gaping os uteri, robbing it of its basement membrane and epithelium. The countless loops of nervelets and bloodvessels which form the villi are thus left naked. Their exposure begets an irritation which attracts an undue flux of blood to the cervix. The swollen mucous crypts and submucous tissues of the cervical canal push out before them the lining membrane, which thus becomes everted like the conjunctiva in ectropium. The constant fretting of the unprotected nerve filaments excites local or reflex pains. Or perhaps, nature having tried her hand at a tardy cure, a nerve imprisoned in a dense mass of cicatricial tissue is unduly pinched, and its outcries aid in keeping up the mischief.

That this lesion is frequent, and that it is an important factor in the production of uterine disorders, witness the testimony of various writers Dr. P. F. Mundé states that of those women applying to him for treatment 5.6 per cent. exhibit lacerations of the cervix. Dr. H. T. Hanks puts the average at 8.4 per cent.; Dr. Montrose A. Pallen "at fully 40 per cent."[1] Dr. W. H. Baker at 10 per cent.[2] My own experience at the Dispensary for the Diseases of Women at the University of Pennsylvania would lead me to infer, that about one out of every six women suffering from uterine trouble has an ununited laceration of the cervix. As another

[1] New York Medical Record, 1876, p. 823.

[2] Boston Medical and Surgical Journal, Sept. 20, 1877.

evidence of its frequency I may add that I have operated for this lesion eighteen times within the past twelve months.

I have often seen profuse menorrhagia, stubborn leucorrhœa, cervical and corporeal hyperplasia, chronic ovaritis, and every kind of prolapse of the womb, starting from such a rent. I have now in charge a woman who at her first labor—an instrumental one—met with a double laceration of the cervix. As it did not heal up, her convalescence was a tedious one, and she never got back her former good health. In her second pregnancy, when she first came under my care, the chafed and torn cervix began to swell and grow until it projected beyond the vulva. The pain and distress from this condition kept her on her back during the last month of gestation. Finally in her labor I had the novel experience of releasing the head from the grasp of the cervix, long after it had passed out of the vulva. After the birth of the child I was able to pull out the bruised and angry-looking cervix to a length of fully four inches outside of her body. As my advice for an operation was unheeded, she is now bed-ridden from a third pregnancy. The swollen and purple cervix protrudes at least two inches from her person, and shows a deep jagged notch on each side.

Now, although this woman conceived twice, yet this lesion is so common a cause of sterility, that I always suspect its existence whenever a guileless woman stops bearing after her first labor. The sterility is due partly of course to the disorders, the flexions, and dislocations of the womb which, as I have shown, follow such an injury. But it is due also to the acridity of the discharges which kills the spermatozoa, or to the viscous plug of mucus which often closes the remnant of the cervical canal. Again, the deep notches in the cervix hinder that suction action of the womb during the sexual orgasm,—just as the split nozzle of a syringe cannot suck up a thin stratum of fluid. Further, the cervical canal, denuded of its epithelium, presents such a barrier to the migration of the spermatozoa as a desert does to the advance of an army.

But these are not the only evils following such an injury. The weakened retentive power of the cervix often leads to repeated miscarriages. This I have known to happen over and over again. Often have I been obliged to puncture or to cross-hatch a brood of retention cysts which aided in the eversion of the mucous lining. Once I removed a sessile polypus as large as a pigeon's egg, which grew out of a cluster of exposed Nabothian glands. Further, I feel very sure that many an epithelial cancer of the cervix starts from such a constantly chafed and fretted surface. For, in my experience, a cancer of even a movable womb with a ragged notch on

one side of the cervix apparently eaten down to the vaginal junction, is no uncommon event.

The diagnosis of such lacerations is by no means so easy as one would *à priori* suppose. There exists, indeed, no visible and tangible lesion of the body in which errors in diagnosis are so frequently made, as in this. It is often mistaken for cancer, but far more frequently for granular erosion—the so-called ulceration—of the cervix. When the flaps skin over without uniting, as they sometimes do, there can be little or no difficulty in the way of recognizing the nature of the lesion. The finger will then feel the fissure, and the eye see through the speculum a cervix, notched like a bishop's mitre when the slit evenly divides it, or gaping open like a shark's mouth when the slit unevenly divides it. But, when the epithelium has long been shed; when the abraded surface is studded with enlarged follicles which feel like shot, or is roughened by red and angry-looking papillæ; when the cervix has increased in bulk, and each lip has curled over like the ends of a split celery-top, or like a mushroom—the nature of the local trouble is very likely to be misunderstood.

The pouting out of the mucous lining of the canal, and the curling over of the split lips so efface the original fissure, that often it cannot be felt by the touch, or be seen by the eye. If a cylindrical speculum or an ordinary bivalve one be used, the convex surface of the cervix will be still more flattened out, and all traces of a fissure be so obliterated that the red, raw, and angry-looking papillæ of the everted mucous lining of the cervical canal will be inevitably mistaken for an erosion, that is to say, for what is commonly called an ulceration of the womb. The illusion is so perfect, that I do not suppose that there is a physician in this hall who has not made this mistake. I will go further, and venture to say, that there is not a physician present who, if he confines himself to the use of a cylindrical speculum, is not now treating some case of cervical laceration for supposed "ulceration." My own past mistakes in this direction embolden me to make these assertions. Sometimes, on the other hand, the cylindrical speculum will so close the torn lips as to conceal both the fissure and the patch of erosion. When the bivalve speculum is used, the liability to error is not so great, but even with it mistakes are constantly being made. Not unfrequently, when the naked and everted cervical canal is unusually angry-looking, bleeding at the slightest touch, and perhaps fringed with cock's comb granulations, epithelial cancer is suspected, and an unfavorable prognosis given.

What then are the means for diagnosis? If any one of my hearers

has in his practice a case of stubborn erosion of the cervix, secreting a vitreous and ropy discharge or bleeding at the slightest touch, —one in which the cervix fills up the whole lumen of his speculum; one which improves by rest, but relapses with exercise: or say, one in which the sound cannot be made to enter the canal at the centre of an apparently patulous os, as it ought to were the os merely enlarged, but only at one end of it. Or if he have a case which, by unremitting attention, he has succeeded in skinning over, and yet in a short time his patient returns for treatment, as bad as before, with the new epithelium rubbed off, by coition or by vaginal attrition—if he have such a case, let me ask him, on his return home, to examine his patient for a rent of the cervix, first with the finger and then in the following way: Place the woman on her back and use a base-opening bivalve speculum; or on her side, which is the better position, and introduce a duck-bill speculum. Take next a uterine tenaculum in each hand and hook the fore and hind lips of the cervix, each lip on its vaginal surface. Try now to draw the two lips together forward, and if a rent exists, they will come in contact, the cervix will become smaller, the supposed "ulceration" will disappear, and a cleft will run across the cervix. By such an examination he will probably find that the apparently superficial opening in the cervix, which he has hitherto taken for the *os externum*, is in reality the mouth of the uninjured portion of the cervical canal, and on a level with the forks of the fissure, being actually from half-an-inch to an inch away from the site of the original *os externum*. And he will by this time have discovered that the collar of erosion surrounding this supposed *os uteri*, which he has been trying for months to heal, is nothing more or less than the naked and chafed mucous lining of the split-open cervical canal. He will now take in the situation and see that this delicate membrane cannot be healed unless shielded, and that it cannot be shielded unless by the restoration of its protecting canal.

Let me not convey the impression that every woman who has an ununited rent of the cervix is doomed to sterility or to hopeless invalidism. Far from it, there are those who seem as unconscious of any ill effects from such a lesion, as some few healthy women who carry retroverted or retroflexed wombs. One lady I know, who has borne several children, and is still bearing, although her cervix was split in two at her first labor. Another, with a like injury, has been barren since her first labor, but is otherwise well. In these two cases, however, each flap of the rent has skinned over, and their edges lie parallel and have not curled over. Sometimes, again, the menopause will bring relief, but usually it does not, because the

secondary lesions, such as subinvolution, hypertrophic elongation and uterine displacements, will still continue. When, however, the lips of the womb have curled over, and the cervix assumes the form of a mushroom, its free portion being the most bulky; when the mucous lining of the cervical canal thus becomes everted, and has consequently been robbed of its epithelium; when a stubborn patch of erosion secrets an abundant and acrid discharge; when the womb stays congested or hypertrophied or becomes displaced, then the only hope of a cure lies in the reconstruction of the cervical canal. In other words, whenever such lesions beget uterine disorders, and they very commonly do so, the woman will rarely get well without an operation. Sometimes, indeed, an operation will be needful simply to make the injured cervix project far enough for a pessary to lodge behind it. And this brings me to the treatment of such lacerations.

An acute laceration of the cervix should be treated by rest so long as inflammatory symptoms keep up, and by great cleanliness. The vagina should be washed out twice daily by weak solutions of carbolic acid or of the potassium permanganate, for it is asking too much of nature to heal kindly a wound drowned and sodden in a puddle of stinking lochia. If hemorrhage be profuse immediately after the accident, a lump of ice should be placed in contact with the cervix. This failing, vaginal injections of alum or of tannin may be made, but not of iron, which interferes with immediate union. In very bad rents it would, perhaps, be best to stop the bleeding by the introduction of silver-wire sutures. In any case, I think it should be the duty of an obstetrician to examine his puerperal patient carefully both immediately after labor and just before he gives up his attendance on her, so that if a rent of the cervix exists he may discover it and be prepared to treat it *secundum artem*.

Should the rent fail to close, and his patient refuse an operation, the best treatment will be that which lessens the local congestion, and tends to glaze over the naked villi. These ends are best furthered by vaginal injections of at least a gallon of water as hot as can be borne, by the puncture of the retention cysts, by the nightly introduction of a tampon charged with glycerine, or by vaginal suppositories containing tannin or the persulphate of iron. One drachm of tannin together with half a drachm of metallic iodine dissolved in an ounce of flexible collodion makes an excellent application. It protects the raw surface by an alterative, styptic and elastic pellicle, which lasts for several days. Good will also be gained by painting the eroded surface every five days with a satu-

rated tincture of iodine, followed occasionally before it dries by a weak solution of the silver nitrate. This forms a protective and alterative crust of the silver iodide. The common practice of treating these erosions with the solid stick of lunar caustic is a bad one, on account of the cicatricial tissue which it leaves behind. Such a dense and gristly tissue often pinches peripheral nerve-filaments so severely as to produce ovarian or uterine neuralgia, wholly or partly quenching sexual desire and causing other psychological disturbances. Often a pessary will do good, if for no other reason than that of lifting up the cervix off from the vagina, and of stopping the friction of locomotion. As the menorrhagia in these cases often comes from fungoid proliferation of the endometrium of the subinvoluted womb, much advantage may accrue from the use of the curette.

Should an operation be decided upon, it must not be hastily undertaken. Success depends largely on the state of the woman's health, and upon the condition of her pelvic organs. Some preparatory treatment will usually be needed. The preliminary use of the curette is always good practice, whenever the monthlies are profuse. If the womb be fixed, or the roof of the vagina be hard and tender, an operation would be very likely to rekindle the embers of a previous attack of pelvic inflammation. If the cervix be engorged with blood, or be studded and stiffened with enlarged Nabothian glands, the denuded surfaces will probably not unite. Blood must be taken from the cervix by scarification, and these glands must be punctured and emptied. Vaginal injections of a gallon of hot water twice daily will be of service. So also will local applications of carbolized iodine and vaginal suppositories containing half a grain of morphia and three of tannin. Pledgets of absorbent cotton dipped in a glycerole of tannin and packed in front of the cervix and behind it, will meet two ends. They will make the cervical tissues more healthy, and will keep the lips from spreading apart. If the broad ligaments be tender, small blisters over them frequently repeated will do much good. In such cases I am in the habit of prescribing small doses of corrosive sublimate united either with the muriate of ammonium, or with the muriated tincture of iron. When all traces of inflammatory deposits have disappeared, the time has come for the operation, but not before, as a rule. In one obstinate case, however, I attributed their persistence to the irritation set up by the cervical lesion, and by curing this I cured the phlegmon; but this is hazardous practice.

The proper time for an operation in the female organs of generation, is during the week following that of the menstrual flux. My

own mode of performing it is as follows: The woman is placed on a table either in the left lateral position, or on her back in the lithotomy position,[1] and the duck-bill speculum introduced. The operator first separates the lips of the fissure by two tenacula, so as to find out the position of the cervical canal. He then draws them together in order to determine the site and the size of the future *os externum*, due allowance being made for after-shrinkage, which, on account of the mushroom-form of the cervix, will be greatest at this point. Having thus mapped out the amount of tissue needing denudation, he steadies the cervix by one tenaculum or by a double one, which he hands over to an assistant—and I may here say that three assistants will be needed. Next, he pares the lateral edges of what is to be the *os externum*, and passes on each side of it through both lips of the cervix a long iron-wire suture. Traction on these two strong wires by an assistant will drag the cervix down within manipulative reach. The operator then proceeds to denude the edges of the fissure and to dissect away all cicatricial tissue. If the fissure be double he begins on that side of the cervix which is the lower as the woman lies, so as not to be annoyed by blood trickling down from the upper one. To avoid hemorrhage from that erectile and therefore vascular body, the cutting should ordinarily be done by scissors, and for convenience by two or three scissors with varying curves. But the knife is by all odds the better instrument, and it can always be unhesitatingly used, whenever the cervix can be dragged down to the vulva—that is, within easy manipulative reach in case of profuse hemorrhage. I have repeatedly carried the dissection completely around the cleft in one single strip, but this cannot always be done, especially when the fork of the rent dips down to or below the vaginal roof. A delicate knife curved on the flat then comes handy. In freshening so deeply situated an angle, the circular branch of the uterine artery is in danger of being wounded. In one of my operations it spouted far enough to spatter my face and clothing and was not readily controlled. The hemorrhage during the operation is free, and by obscuring the parts often troublesome. For staunching this, Emmet recommends a watch-spring tourniquet placed high up on the supravaginal cervix; others employ the loop of a wire-écraseur, but I do not use them for fear that they may injuriously constrict the bladder or the peritoneum in Douglas's pouch. I have, however, found that

[1] The lithotomy position is one of the very best for most of the operations on the female sexual organs. As recommended by the late Professor Simon, I have found it to answer admirably in operating for vesico-vaginal fistulæ.

traction on the ends of a wire-suture passed deeply below the fork of the wound will stay the hemorrhage, at least enough to permit further careful denudation, while subsequent coaptation of the raw edges by stitches will effectually stop it. If the flaps are too dense and too much curled over to be brought into close contact, their redundant convex surfaces must be shaved off. The introduction of the sutures is by all odds the hardest part of the operation. The ordinary surgeon's needles are not strong enough to penetrate the dense and gristly cervix. Twice have I had them to snap and to leave a fragment in the cervix, but with no appreciable result. The best needle for this purpose is the short, round, lance-pointed one devised by Dr. Sims. Armed with a loop of silk, it is passed by means of a strong needle-holder. This loop is made by waxing the ends of a fine silk ligature, and passing them together through the eye of the needle. They are then separated and tied in a half-knot around the loop just beyond the needle. Each suture, preferably now of silver, is passed by bending its end sharply and hooking it over the silk loop, and each one is secured either by twisting or by a perforated shot. If the sutures are put in properly, hemorrhage cannot take place from the denuded surfaces, but it sometimes comes from a suture track, in which a vessel has been wounded by the needle. However arising it may be stanuched, as Emmet advises, by vaginal injections of water as hot as can be borne, or by a saturated solution of alum, which in my opinion is one of the best of hæmostatics, besides not interfering with union by the first intention. I have, however, never met with a bleeding sufficient to need any kind of treatment whatever.

The pain after the operation is very trifling, barely exceeding what most women suffer at their monthlies. The after-treatment consists in keeping the patient bedfast for two weeks, in binding the bowels for six days, and in drawing the water for eight and forty hours. At the end of that time the woman may get on her hands and knees and empty her bladder herself. I prefer this position to that on the bed-pan, because in the latter there is some danger of the urine trickling down into the vagina, and reaching the wound. After the third day the vagina may be washed out twice daily with a weak, carbolized solution. On the seventh day a cathartic should be given, and by the eighth or the ninth the stitches can be removed. I do not like to leave them in longer lest they should cut such deep furrows into the cervix as must heal by cicatricial tissue. When performed with care, and after the manner which I have described, this operation is perhaps the most successful one in uterine surgery.

In illustration of the advantages gained by the repair of such a

cervical lesion I shall limit myself to two out of many examples. The one has been chosen on account of my mistaking the rent for an erosion, or ulceration of the womb; the other, to show what physical and psychical disturbances it may give rise to.

Case I.—C. D., aged 27, had her first and only labor ten years ago. She has not conceived, nor been well since. For a long time she was under the care of one of our best physicians. Failing to cure her, he sent her to me with a note, stating that she had the worst and most stubborn erosion and leucorrhœa that he had ever met with. I found a young and handsome woman suffering distressing bearing-down feelings, frequent micturition, constant pain in her back—in short with every ache that a disordered womb can possibly give rise to. Sexual intercourse was painful, and followed by bleeding. The catamenia were profuse and protracted, and the intermenstrual leucorrhœa abundant. The womb was heavy, retroflexed, and 3.5 inches long. The cervix, badly torn bilaterally, was bulky and very tender to the touch. It was occupied apparently by a large blood-red erosion. From it and the cervical canal there issued the most abundant and the most tenacious discharge I ever saw. It could be drawn out in strings nearly a yard long. This happened some years ago, before I had begun to appreciate the important rôle which a torn cervix plays in the production of uterine disease, and for many months I mistreated her. True, I used douches of hot water, together with scarification and iodine, and also shored up the womb with a pessary, all of which was well enough, and gave her much relief. But I also applied chromic and nitric acids, the silver nitrate, and in short used every known means to cure the supposed erosion. No further good came from them, however, and she finally gave me up.

Long afterwards, when my eyes were opened on this subject, I remembered this unfortunate patient, and hunted her up. She had meantime been trying several other physicians, who had also failed to do her any good, but her confidence in me was shaken, and I found her in no mood for an operation. Yet other physicians were consulted, and with like results, until, finally driven by sheer despair, she returned to me, but in far worse plight than before. Coition was now shunned, sexual desire had nearly disappeared, and the seeming erosion had by this time been in a measure replaced by dense cicatricial tissue. Aided by Drs. B. F. Baer, W. H. Heath, and P. G. Skillern, in October last, I denuded the edges of the rent, and cut away all the cicatricial tissue, which creaked under the knife and scissors like sole-leather. Three sutures were needed to close up one side, and four the other. Perfect healing took place, so perfect

that in ten days the line of union on the left side could not be seen. The leucorrhœa at once began to lessen, and the other symptoms to mend. When I last saw her, about six months after the operation, the sound gave a measurement of 2.5 inches; the os was round and free from the slightest vestige of erosion; the womb had righted itself, and no longer needed a pessary. She was in short well and very grateful.

Case II.—M. C., aged 30, gave birth, some seven years ago, to her first child, after a long and hard labor, in which the forceps was applied, and a still child delivered. Being the daughter of a physician, she had, besides her father, excellent medical attendance. After being bedfast for several weeks, she slowly mended enough to get up, but not without all the symptoms of arrested involution. Previously in rude health, she has never been well since, nor has she again conceived. I saw her first in the autumn of 1875, some four years after this labor. She complained of worrying pelvic pains, of great weariness and weakness, of loss of sleep and of appetite. There was also a total loss of all sexual desire, which led to complaint and estrangement on the part of her husband. Like the preceding case, she had severe menorrhagia, and an abundant and a stringy leucorrhœa. Her nervous system was so wholly upset that she was the victim of distressing hallucinations. For instance, she could not stay in a room by herself; had a constant apprehension of some impending danger; never dared to leave her home without a companion, and even then fancied that every one she met looked askance at her, or that some evil-minded person was following her. Body and mind were alike shattered, and she was altogether in very bad case.

I found the womb large and heavy, retroflexed and tender, its length + 3 inches, the cervix on either side torn flush with the vagina, and the everted lining of its split canal crimson and angry-looking. She was averse to an operation, and I had to content myself with palliative means—pretty much the same as those used in the former case. She grew much better, but by no means well. Relapses were frequent, and for the next two years she was more or less under my care. Finally, her sexual apathy and her barrenness, more perhaps than anything else, led her to submit to an operation, and I restored the cervix last June, being assisted by Drs. B. F. Baer, H. Wharton, and W. H. Heath. Four stitches were needed on each side, and perfect union took place. On the eighteenth day she went home, a long journey by rail. I saw her day before yesterday, for the first time since she went home, nearly a year ago, and found her wonderfully bettered. The womb has

shrunk back to very nearly its natural size, the retroflexion has changed to a version, the erosion has gone, the leucorrhœa has ceased, her hallucinations have vanished, and, as she took pains to inform me, her sexual feelings have returned. She has not yet conceived, and that is a serious drawback to her happiness; so I inserted a pessary with the hope that a change of version would cure the sterility.